

Title (en)

Magnetic head, fabrication method therefor and perpendicular magnetic storage device

Title (de)

Magnetkopf, Herstellungsverfahren und senkrechte magnetische Speichervorrichtung

Title (fr)

Tête magnétique, procédé de fabrication et dispositif de stockage par magnétisation perpendiculaire

Publication

EP 1087381 A2 20010328 (EN)

Application

EP 00308394 A 20000925

Priority

JP 27136599 A 19990924

Abstract (en)

A magnetic head (10A) is configured by forming a thin-film-shaped magnetic element (11-14) on top of a thin film (30) that is provided parallel to a medium-facing surface. An aperture (30H) is formed in the thin film, and part (10T) of a main magnetic pole is formed to have a tip portion that protrudes into that aperture. This configuration makes it possible to impose highly accurate control over the amount by which thin-film-shaped magnetic elements are recessed from the medium-facing surface, while simultaneously exerting accurate control over the amount of protrusion of the main magnetic pole tip portion by making the thickness of the thin film extremely small. As a result, the recording flux strength at the main magnetic pole tip portion can be increased to the ultimate value thereof, making it possible to supply a head that can record on a high retention force medium suitable for higher storage densities. <??>The invention also relates to a reading magnetic head (20A), to a magnetic storage device incorporating such a head and to a method of fabricating a head. <IMAGE>

IPC 1-7

G11B 5/127; **G11B 5/00**

IPC 8 full level

G11B 5/127 (2006.01); **G11B 5/31** (2006.01); **G11B 21/21** (2006.01); **G11B 5/00** (2006.01); **G11B 5/012** (2006.01)

CPC (source: EP KR US)

G11B 5/1278 (2013.01 - EP US); **G11B 5/31** (2013.01 - KR); **G11B 5/00** (2013.01 - EP US); **G11B 5/012** (2013.01 - EP US); **G11B 5/3106** (2013.01 - EP US); **G11B 2005/0029** (2013.01 - EP US); **Y10T 29/49032** (2015.01 - EP US); **Y10T 29/49043** (2015.01 - EP US); **Y10T 29/49044** (2015.01 - EP US); **Y10T 29/49046** (2015.01 - EP US); **Y10T 29/49048** (2015.01 - EP US); **Y10T 29/49815** (2015.01 - EP US)

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 1087381 A2 20010328; **EP 1087381 A3 20031105**; CN 1206624 C 20050615; CN 1308313 A 20010815; JP 2001093112 A 20010406; JP 3499164 B2 20040223; KR 100373672 B1 20030226; KR 20010030480 A 20010416; TW 509920 B 20021111; US 2003156355 A1 20030821; US 6912769 B2 20050705

DOCDB simple family (application)

EP 00308394 A 20000925; CN 00135320 A 20000922; JP 27136599 A 19990924; KR 20000055971 A 20000923; TW 89119686 A 20000922; US 38976503 A 20030318